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10/669,985	09/23/2003	Ivano Gagliardi	CM2698	9736

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EXAMINER

CHAPMAN, GINGER T

ART UNIT PAPER NUMBER

3761

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/669,985

Applicant(s)

GAGLIARDI ET AL. 

Examiner

Ginger T Chapman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102/103*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7, 8, 10-13, 15 and 16 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 5,645,542 issued to Anjur et al.
3. Anjur discloses the claimed invention, a disposable absorbent article having a thermoplastic composition including a thermoplastic polymeric base material having particles of

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absorbent gelling material dispersed therein, with the exception of testing the flexibility of the absorbent article at both room temperature and body temperature. Further, Anjur teaches that it is recognized in the art that the term "thermoplastic" describes a material that softens when exposed to heat and which substantially returns to its original condition when cooled to room temperature (Column 4, lines 50-54).

4. Anjur teaches that, depending on the conditions under which the superabsorbent material is being used, hydrogel-forming polymeric materials are generally capable of absorbing an amount of bodily fluids at least about ten and up to about 100 times the weight of the superabsorbent material; typical conditions include a temperature of between about 0° C. - 100° C., and ambient conditions, such as about 23° C. and about 30 - 60 percent relative humidity (Column 8, lines 14-26). Anjur performs test procedures in standard-condition atmosphere such as room temperature of about 23° C. and relative humidity of about 50%.

5. Anjur discloses the claimed thermoplastic composition except for performing a second test at a greater temperature. It would have been obvious to one having ordinary skill in the art at the time the invention was made to conduct a second flexibility test at body temperature because body temperature is the temperature at which the product is used, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

6. Anjur further teaches that a material such as an absorbent structure may entrap a relatively minor amount of liquid, such as water, within the material by absorbing such liquid from humidity in the air (Column 12, lines 23-27). Anjur further teaches that liquid saturating the absorbent structure improves the elastic properties of the structure by breaking any hydrogen

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bonding that occurs among the staple fibers of the structure (Column 12, lines 59-68). Examiner maintains that testing the instant article at  $75\pm 2\%$  relative humidity merely reveals the inherent capacity of the instant article to become less stiff and more flexible as the hydrogen bonds of the fibers of the structure are broken due to liquid absorption.

7. Applicant recites in the instant specification that the instant article is more flexible in use condition than before use, i.e., at room temperature and 50% relative humidity, and is able to conform to the anatomical configuration of the wearer due to the property of the article to become more flexible as the temperature and relative humidity increase (Page 2, lines 14-22).

8. Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. Accordingly section 2112 of the MPEP, some of which is reproduced below, dictates the manner in which the claims have been examined.

9. “[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art’s functioning, does not render the old composition patentably new to the discoverer.” *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

10. Anjur discloses a substantially identical thermoplastic composition having block copolymers and polyolefins. In particular, Anjur teaches the use of diblock, triblock and multiblock copolymers such as olefinic copolymers. More particularly, Anjur teaches the use of

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diblock A-B type, triblock A-B-A type, and radial copolymer structures having the formula (A-B) $n$ C wherein C is the hub or central polyfunctional coupling agent and  $n$  is an integer greater than 2 (Column 5, lines 20-68 to Column 6, lines 1-49). The block copolymers are segmented elastomers having a hard segment (A block) and a soft segment (B block). The B block segment imparts the desired properties of flexibility and resilience to the resulting composition. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize these materials for a thermoplastic composition since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

11. When viewing the claimed invention the limitations drawn to test results, i.e. flexibility measured according to stiffness tester at 38°C. ... 20% more than the flexibility of the article when measured at 23° C., are being considered as product-by-process limitations. Accordingly, section 2113 of the MPEP, some of which is reproduced below, dictates the manner in which the claims have been examined. Since the product can only be understood by finding the result of certain claimed properties, which are the result of tests, the burden of proof to overcome any rejection must be shifted to the applicant.

12. “The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature” than when a product is claimed in the conventional fashion. *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious

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difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983)

13. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

14. Anjur discloses the claimed composition that applicant has indicated impart the desired properties. In as much, the teachings of Anjur provide all that is claimed in the instant application. In the alternative, it would have been obvious to have provided the material that meets required test properties since the general conditions of the claimed invention are disclosed in the prior art and discovering optimum ranges involves only routine skill in the art.

15. “[T]he lack of physical description in a product-by-process claim makes determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not of the recited process steps which must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before

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it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

16. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anjur in view of U.S. Patent No. 5,009,653 issued to Osborn, III. Anjur discloses that using absorbent gelling material in high concentrations in the thermoplastic absorbent structure allows for thin, lightweight absorbent articles which can still function in the desired manner (Column 9, lines 30-35). Osborn teaches a thin, flexible sanitary napkin having a caliper of less than 3mm (Column 15, lines 61-65) and an absorbent core containing from about 5% to 85% by weight of absorbent gelling material which is distributed in an amount from 0.001 – 0.009 grams/square centimeter (Column 6, lines 48-60). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the disposable article of Anjur less than 3mm thick in view of the teachings of Osborn III so as to form an absorbent article that is thinner and less bulky, thereby offering the wearer enhanced fit and comfort yet still having a fluid capacity great enough to allay consumer fears of leakage and staining, would have been an obvious modification.

17. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anjur in view of U.S. Patent No. 4,937,138 issued to Mostert. Anjur discloses materials which could be used as additional components such as antioxidants, stabilizers, surfactants, waxes, and materials to enhance the processability of the components of the thermoplastic composition. Anjur fails to teach an absorbent article wherein the polymeric base material is a hot melt adhesive. Mostert teaches a hot melt adhesive having butane-1 homopolymers and copolymers comprising a variety of alpha-olefins or comonomers of propylene or ethylene (Column 2, lines 11-65); tackifying



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resin such as Regalrez made by Hercules, Wingtack from Goodyear and Zonester from Arizona Chemical Co. (Column 3, lines 20-43), antioxidant/stabilizer such as hindered phenols such as Irganox 1010 or Ethanox 330 (Column 3, lines 3-18), nucleating agents such as isotactic polypropylene, polyethylene, polyethylene based waxes and amides, plasticizers to enhance the processability of the adhesive (Column 5, lines 8-13) and waxes to lower the viscosity in the adhesive composition without decreasing the strength of the adhesive (Column 3, lines 44-56).

18. Mostert discloses a substantially identical hot melt adhesive for disposable absorbent articles except for ranges of plasticizer and resin, however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary proportions of plasticizer and resin to provide a hot melt adhesive capable of exhibiting good flexibility at the bonds, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. As such, to use a hot melt adhesive of the type generally taught in Mostert as the polymeric base of Anjur would have been an obvious modification to one of ordinary skill in the art.

19. Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anjur in view of U.S. Patent No. 6,765,125 issued to Abuto. Anjur discloses the composition of the claimed invention with the polymeric material present in nonuniform distribution (Column 10, lines 14-15) to wick or store fluids, with the exception of configuring the absorbent material in a plurality of unattached spaced apart rows. Abuto teaches placing the composition in spaced apart rows, zones, stripes or channels (Column 6, lines 16-17). This configuration allows liquid to wick along the longitudinal length of the article to be absorbed along the broad front on either

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side of the stripes or rows, thereby using the superabsorbent to maximum capability and providing greater comfort to the wearer by distributing the fluid away from contact with the body.

20. Further, having a plurality of longitudinal channels provides the article with increased flexibility about its longitudinal axis by creating a plurality of preferred bending axis. Therefore, to one having ordinary skill in the art at the time the invention was made to configure the zones of absorbent material of Anjur in stripes or channels to improve longitudinal fluid movement and distribution as taught by Abuto would have been an obvious modification to one of ordinary skill in the art.

### *Conclusion*

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent Nos. 5,009,653 and 5,951,537 issued to Osborn, III disclose thin, flexible absorbent articles providing enhanced fit and utilizing hydrogel forming polymers to increase fluid capacity. Osborn ('653) discloses sanitary napkins having a caliper of less than 5mm, less than 3mm, and less than 2.6mm (Column 15, lines 60-68 to Column 16, lines 1-6); total absorbent capacities of 20 grams and 14 grams and test absorbent capacity of 8 grams; flexure resistance of less than 400 grams, less than 300 grams and less than 250 grams (Column 17, lines 27-36 and Column 18, lines 1-35) and particles of polymeric gelling material which may be nonuniformly distributed such that regions or zones of the article may have higher concentrations of the hydrogel (Column 6, lines 36-41). Flexure resistance was measured according to modified ASTM D 4032.82 (Column 10, lines 44-55) at 21°C. and 50±2% relative humidity (Column 11, lines 58-61) Osborn ('537) discloses a flexible absorbent article having flexure resistance of less

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than 130 grams (Column 10, lines 12-19), using modified ASTM D 4032.82 (Column 10, lines 22-24) at 21° C. and 50±2% relative humidity.

22. While ASTM D 4032.82 is a circular bend procedure simultaneously averaging stiffness in all directions, Examiner maintains that measuring multidirectional flexibility encompasses flexibility in both longitudinal and transverse directions.

23. U.S. Patent No. 5,422,169 issued to Roe teaches a particle size distribution in the range of 125 - 300 microns, with average particle size of 125 - 250 microns (Column 7, lines 37-38). Decreasing particle size enhances the fluid uptake rate by increasing the surface area to mass ratio of the particles, allowing the absorbent structure to quickly take in and store fluids. Accordingly, it would be desirable to use smaller particles in higher concentrations in order to further reduce the thinness and lightweight characteristics of the absorbent article, thereby providing better fit and comfort to the wearer.

24. A desired characteristic of such disposable articles is thinness as thinner disposable articles are less bulky to wear, fit better under clothing, and are less noticeable. Further, thin disposable articles are more compact, making the product easier for the consumer to carry and store. The ability to provide thinner absorbent articles has been contingent on the ability to develop relatively thin absorbent structures that can acquire and store large quantities of bodily fluids. Therefore, there is a trend towards employing higher concentrations of superabsorbent hydrogel-forming polymers to achieve this purpose.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ginger T Chapman whose telephone number is (703) 305-0471. The examiner can normally be reached on Monday through Friday 8:30 a.m. to 5:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Schwartz can be reached on (703) 308-1412. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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